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DOES ORGANIZATIONAL CULTURE MODERATE THE RELATIONSHIP BETWEEN ISO 9000 SOFT FACTORS AND ORGANIZATIONAL PERFORMANCE?

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ABSTRACT

The aim of this paper is to examine the influence of organizational culture on the relationship between ISO 9000 soft factor and organizational performances. The inconsistent finding from published works on the relationship between ISO 9000 and organizational performance may due to organizational culture. And also there is still limited research focusing only on the soft factor of ISO 9000 and organizational performance moderated by organizational culture. This research employs item response theory (IRT) in examining the level of soft factor implementation in Malaysian automotive companies. Rasch Model analysis is adopted and the tool used to analyse data is Winstep 3.6. The finding revealed that the organizational culture is an obstacle to the relationship between the soft factor of ISO 9000 and organizational performance. In addition to that, the result also revealed that an organization with high ability in overcoming the organizational culture and resource management items especially employee empowerment and team work has a higher possibility to improve their organizational performance.

JEL Classifications:
Keywords: ISO 9000, soft factor, organizational culture, Rasch Model, organizational performance
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INTRODUCTION

In the era of intense competition and globalized market, the survival of the individual firms depends on their ability to enhance their competitive advantage in the global market. In order to achieve superior business performance, the producers are required to focus on important factors such as technological capability, product quality, adherence to standards and rapid response (Hung & Tang, 2008). However, quality also has emerged as a strategic competitive tool for organizational success in the domestic and international market (Kartha, 2004). Many concepts and techniques have been adopted to improve the standard of service and quality of products. Many organizations have reviewed that an effective quality management can enhance their competitive abilities and provide strategic advantages in the marketplace (Anderson, Rungtusanatham, & Schroeder, 1993). In light of this, it may said that it is vital for organizations to develop or adopt an effective Quality Management System, very often associated with ISO 9000 series (Rohitratana & Boon-itt, 2001).

ISO 9000 quality management system is used worldwide by both large and small organizations. It has been adopted in 180 countries, with 1.1 million certifications worldwide (ISO, 2011). Due to the wide acceptance of ISO 9000 has led to considerable interest in the research literature. Empirically, ISO 9000 has been proven to help the improvement of performance of the organization (Zain & Ahmad, 2000). Feng, Terziovski, & Samson (2008) stated that there are some conflicting findings on the bottom-line effects of ISO certification and the practices which lead to successful implementation. This conflicting result may due to the commitment to implement the ISO 9000 requirements or the culture that establish in the organization. As mentioned by Prajogo & Christopher M. McDermott, (2006) several organizations fail to achieve the expected goals of the implementation of quality management because of ignoring the cultural factors.

Although there are numerous studies related to ISO 9000 series, few of those consider the relationship between soft factor of ISO 9000 requirements and organizational performance. There are few studies such as Abdallah (2013) and Shahin & Dabestani (2011) discussing the issues of soft factors in influencing the implementation of quality management. The soft factors are mainly derived from total quality management (TQM) factors but none are considering the ISO 9000 requirements. The requirements stated in the ISO 9000 standard are more focused compared to the TQM concept. Although there are studied related to organizational culture, quality management and organizational performance (Baird, Hu, & Reeve, 2011; Mehrdad, Mosavi, & Salehi-Kordabadi, 2012) but still limited research in soft ISO 9000 factors. Hence, this study will examine the influence of organizational culture in the relationship between ISO 9000 soft factor and organizational performance.

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The Rasch model is adopted as analysis tool to examine the stated variables. The underpinning theory for this model is called Modern Test Theory which has been hardly applied in studies related to ISO 9000. The scope of this study is an automotive industry in Malaysia.

The automotive industry in Malaysia can be considered as one of the most important and strategic industries in manufacturing sector. It has been earmarked to boost the industrialization process so that Malaysia can be a developed nation by 2020 (Arshad, 2002). This is in line with Third Industrial Master Plan (IMP3), 2006-2020, which has given emphasis on the development in Malaysia of a viable production and distribution centre, catering to automotive vehicles, and parts and components, in the region. The development of the automotive industry has contributed to the economic performance of the country. This contribution was in terms of the generation of employment, and the growth of supporting industries , along the automotive industry's long value chain (MITI, 2008).

LITERATURE REVIEW

ISO 9000

Numerous studies have been undertaken since ISO 9000 established in 1987 on different issues. ISO 9000 has gone through the development from the era of inspection to quality control and change and finally to era of quality assurance under ISO 9001,9002 and 9003. In Dec 2000, ISO Technical Committee published the new standard, which is based on eight quality management principles (Sun, Li, & Ho, 2004). ISO 9001:2008 is the latest version with some amendments, which was published in November 2008. Due to its continuous development, various issues regarding ISO 9000 have been discussed in literature such as motives of ISO 9000 certification, the benefits derived from the ISO 9000 implementation, maintenance of ISO 9000, the ISO 9000 criticism, its impact on organizational performance and its relationship with total quality management (TQM) (Psomas & Fotopoulos, 2009; Wahid, 2012).

The motives of ISO 9000 certification can be classified into two categories: internal and external motivations. Internal motivations are related with desire to improve corporate image and quality, improvement of internal procedures (Brown, Wiele, & Loughton, 1998; Lipovatz, Stenos, & Vaka, 1999; Tari, 2003). On the other hand, external motivations are mainly related with customer pressure (Douglas, Coleman, & Oddy, 2003; Lipovatz et al., 1999). According to Buttle, (1997), marketing purposes also motivate companies to seek for ISO 9000 certification.

The study of Casadesus & Karapetrovic, (2005) revealed no significant differences between ISO 9001/2/3:1994 and ISO 9001:2000 certified companies, in terms of the main motivation factors for being certified. Poksinska, Eklund, & Dahlgaard, (2006) concluded that the motives of ISO 9000 certification factors lead to consistent conclusion which is due to internal and external pressure. However the external factors provide a strong incentive for the organization to be certified.

Another area of studies is the benefit derived from the certification of ISO 9000. Basically the benefits can be classified into external and internal categories (Sampaio, Saraiva, & Rodrigues, 2009). The external benefits more related to improvements in term of marketing and promotional aspects, while internal benefits are related with organizational improvements (Buttle, 1997; Lipovatz et al., 1999; Magd, 2008; Poksinska, Dahlgaard, & Antoni, 2002; Sampaio et al., 2009). Among the external and internal benefits extracted from literature are listed in Table 1 below.

Table 4. MOST COMMONLY STATED ISO 9001 CERTIFICATION BENEFITS REPORTED IN THE LITERATURE

External benefits	Internal benefits
▪ Access to new market	▪ Improved internal procedures
▪ Improve corporate image	▪ Quality awareness improvement
▪ Market share improvement	▪ Productivity improvement
▪ ISO 9000 certification as a marketing tool	▪ Product defect rate decrease/ cost reduction
▪ Awareness Customer relationship improvements	▪ Improved employee morale
▪ Customer satisfaction	▪ Delivery times improvement
▪ Environmental improvement	▪ Internal communication improvement
▪ Improved customer confidence	▪ Product quality improvement
	▪ Competitive advantage improvement
	▪ Customer complaints decreases
	▪ Internal organization improvement.

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The implementation of ISO 9000 certification does not come without a risk factor and organizations should review the benefits and drawbacks of ISO 9000 certifications, as the implementation and the impact of ISO 9000 standards can vary from organization to organization and from country to a country. These variations exist due to the various organizational contexts/variables and the state of countries awareness of quality management, their commitment in helping organizations in implementing quality management tools and techniques, and countries infrastructure/readiness (Magd, 2008).

The companies surveyed by Magd, (2008) perceived top management commitment and the lack of qualified personnel to be the major barriers for the effective implementation of ISO 9001. Many other studies like (Poksinska et al., 2002, 2006) confirmed the importance of top management commitment for the success of the QMS. Another barrier found by Zeng, Tian, & C.M.Tam, (2007) is the short-sighted goal for "getting certified"; which includes the over-expectation on ISO 9001 standard, the mandatory requirement (not wholehearted commitment) in some industries and following the latest trend in certification without clearly understanding the purpose of the certifications.

Soft Factors

According to Lewis, Pun, & Lalla, (2006) the soft factors practices are long term issues and cannot be switched on and off. These factors generally involved the management issues such as planning and direction of the organization. In addition, the human resource management such as training of employee, management leadership, teamwork, supplier relation and customer satisfaction are also considered as soft factors (Abdallah, 2013; Lewis, Pun, & Lalla, 2006). In other words, elements of soft factors are essentially dimensions of people management (Abdullah, Uli, & Tari, 2008). Terziovski & Samson (1999), in their study identified that executive commitment, customer focus and employee focus as soft factors. While Abdullah et al.(2008) identified top management leadership, employee involvement, employee empowerment, employee training and development and team work and communication as soft factors. The classification of the factors is summarized in Table 2 below.

Lewis et al., (2006),(2006a) made an analysis between the TQM and ISO 9000 criteria on the soft factors. They concluded that the soft factors involve customer focus and satisfaction, people training, top management commitment, teamwork, employee involvement, supplier management, communication, rewards and recognition, human resources management, employee empowerment, quality culture, employee satisfaction and social responsibility. The current study partly adopts the criteria developed by Lewis (2006) to fit into two major ISO 9001 clauses that are management responsibility and resource management. These two main clauses and sub-clauses are used as variable in determining the level of ISO 9001 soft factor implementation.

TABLE 2. QUALITY MANAGEMENT SOFT FACTORS

Lewis 2006	Abdullah 2008	Shahin 2011	Abdallah 2013
1. Customer focus and satisfaction	1. Management commitment	1. Committed leadership	1. Customer focus
2. People training	2. Customer focus	2. Adoption and communication of TQM	2. Training
3. Top management commitment	3. Employee involvement	3. Closer supplier relationship	3. Top management leadership
4. Team work	4. Training and education	4. Closer supplier relationship	4. Workforce management
5. Employee involvement	5. Reward and recognition	5. Benchmarking	5. Supplier relationship
6. Supplier management	6. Supplier relationship	6. Increase training	
7. Communication		7. Open organization	
8. Rewards and recognition		8. Employee empowerment	
9. Human results management		9. Zero-defect mentality	
10. Employee empowerment		10. Process improvement	
11. Quality culture			
12. Employee satisfaction			
13. Social responsibility			

ISO 9000 and Organizational Performance

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Numerous researches were conducted to examine the impact of ISO 9000 certification including soft and hard factors towards organizational performance. However, the finding reveals that there are some conflicting results on the effects of ISO 9000 certification and practices on organization performance. For example, Corbett, Montes-Sancho, & Kirsch, (2005) found out that ISO 9000 certification did improve financial performance. While, Feng et al. (2008) used three basic components for implementing the standard, which are: planning for ISO 9001 certification, organizational commitment, and implementing procedures. Organizational performance was measured in two dimensions, namely operational performance (related to organization's internal operations, such as productivity, product quality, and internal customer satisfaction) and business performance (related to financial and marketing such as sales growth, profitability, and market share). The results showed a positive and significant relationship between the certification practices (implementation, organizational commitment, and planning) and operational performance. However, the relationship between these practices and business performance was found to be positive but not significant. Organizational commitment to certification was found to be most strongly related to operational and business performance.

The study conducted by Lin & Jang, (2008) revealed that comprehensive ISO 9001 model was supported by four key constructs such as top management support, quality planning, employee involvement and continuous improvement. They found out that implementing the model led to positive impact on business performance. However, some other studies have shown that implementing ISO 9001 does not appear to lead to improved financial performance of organizations (Aarts & Vos, 2001). The survey conducted on Spanish manufacturing companies revealed that certification has a negative effect on company results, mainly on earnings and ROA (Martinez-Lorente & Martinez-Costa, 2004). This result supports the findings of Singels et al., (2001), who found that certified companies had worse average cost savings, rate of sales growth, rate of market share growth and rate of net benefit growth when compared with non-certified companies. The study conducted by Saad, Asaad, & Aziz, (2014) revealed that there is negative relationship between ISO 9000 soft factors and operational performance. Among the items measured are defect rate, customer complaint and other.

Therefore, there is no true evidence that the ISO 9001 really works; because the survey results are contradictory and consequently further research regarding this topic is needed (Martı´nez-Costa & Martı´nez-Lorente, 2007). However, there are limited studies that classified ISO 9000 requirements into soft and hard factors. Hence this study will examine the level of ISO 9000 soft factors implementation towards organizational performance though application of Rasch Model moderated by organizational culture.

Organizational Culture

Organizational culture is generally is defined as a set of key values, assumptions, understandings, and norms that is shared among members of an organization (Daft, 2005). It is argued that organizational culture may be the critical key that managers can use to direct the course of their firms (Yiing & Ahmad, 2009). In an organization, culture encompasses the values and norms shared by members of a social unit (Schein, 1990). These values and norms indicate correct ways of relating to others (Schein, 1990). Cultural values are in turn reflected in actual behavioral patterns. Although a number of typologies, categorizations and instruments for measuring organizational culture exist, there is little agreement on which ones are more appropriate or superior to the other. Quinn and Spreitzer's competing value framework is used extensively for organizational culture measurement. (Quinn & Spreitzer, 1991.) According to this model, there are competing tension about flexibility and control and focus on internal organization and focus on external environment.

Rasch Model

The Rasch Model is used as an analysis tool in examining the influence of organizational culture towards ISO 9000 soft factors and performance. The Item Response Theory (IRT) under the group of Modern Test Theory is an underpinning theory for the Rasch Model. IRT has the ability to estimate each item's difficulty as well as each person's ability on the same metric, allowing for meaningful comparisons between the two (Bonsaksen, Kottorp, Gay, Fagermoen, & Lerdal, 2013). The Rasch model is one of the specific applications of IRT, and has the ability to provide linear measures from ordinal data by the use of logarithmic transformation procedures (Andrich, 1988). This is required because ordinal data is a categorical data and not an interval data, therefore the linear measures cannot be obtain. The Table 3 below illustrates mathematically that a series of numbers irrespective of base used is not equally spaced, but distant apart exponentially as the number gets bigger. On the other hand, in a log series numbers maintain their equal separation and thus equal interval is obtained (Aziz et al., 2008; Saad, Yusuff, Abas, Aziz, & Masodi, 2011). The Table 3 below also shows the equal separation and term it as *logit* as a measurement of ability. The difference between $\log_{10}5$ and $\log_{10}2$ is constant and remains of equal for the distance between $\log_{10}50$ and $\log_{10}20$. Similar case happens for $\log_e$; hence *logit*.

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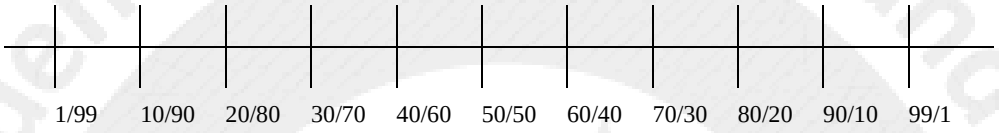
TABLE 3. COMPARISON OF NUMERICAL AND LOG INTERVALS

Numerical series	$\log_{10}$	$\log_e$
1	0.000	0.000
2	0.301	0.694
5	0.699	1.609
10	1.000	2.303
20	1.302	2.997
50	1.699	3.912
100	2.000	4.606

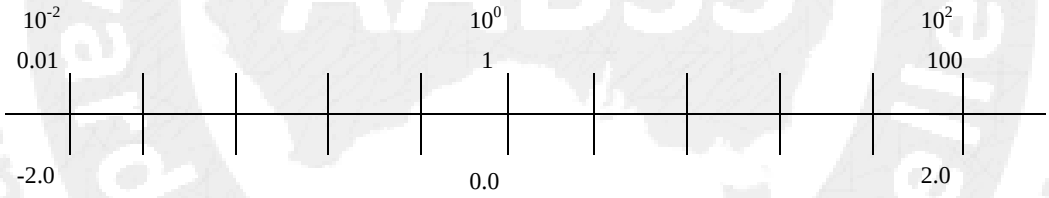
Rasch Model is a probabilistic model; it is about the chances of choosing of one rank over the others. It involves the odd ratio. The Figure 1 below shows the probabilistic line diagram, while Figure 2 shows the *logit* ruler.

FIGURE 1: PROBABILISTIC LINE DIAGRAM



In order to achieve an equal interval scale, the logarithm is used for odd probabilistic value in Figure 1 above. For example the value of 1/99 is equivalent to 10^{-2} when $\log_{10}$ is applied to it, then $\log_{10}10^{-2}$ is equal to -2.0; value of $\log_{10}10^{-1}$ is equal to -1; value of $\log_{10}1$ is equal to 0 and so forth. The Figure 2 below shows the newly established *logit* ruler as linear scale, with equal interval separation.

FIGURE 2: LOGIT RULER



Based on the above theorem, the rank order data can be transformed into equal interval separation.

Under the Rasch philosophy the data collected must fit the Rasch model's specification (Azrilah Abdul Aziz et al., 2007; Bond & Fox, 2007) rather than establishing "best fit line". Rasch moves the concept of reliability from establishing "best fit line" of the data into producing a reliable repeatable measurement instrument, Wright & Mok (2004) extracted from Azrilah Abdul Aziz et al., (2008). For the data collected to be considered as fit to Rasch Model, it must meet the following criteria, there are:

1. 'Point measure correlation' (PtMeaCorr); 0.4 <PtMeaCorr value < 0.80
2. 'Outfit mean square' (MNSQ); 0.5 < MNSQ value < 1.5
3. 'Outfit Z-standard' (ZSTD); -2 < ZSTD value < +2

The investigation and decision has to be made if any data does not meet one of the criteria. Hence this study is adopting this model basically to measure the level of organizational culture influence the soft factor of ISO 9000 standard requirements and performance.

THEORETICAL FRAMEWORK

The theoretical framework is depicting the relationship between the variables as discussed. The objective of this study is to examine the influence of organizational culture (as moderator) towards the relationship between the soft factors of ISO 9000, which is represented by management responsibility and resource management (as independent variables) and organizational performance (as dependent variable). Another objective of this study

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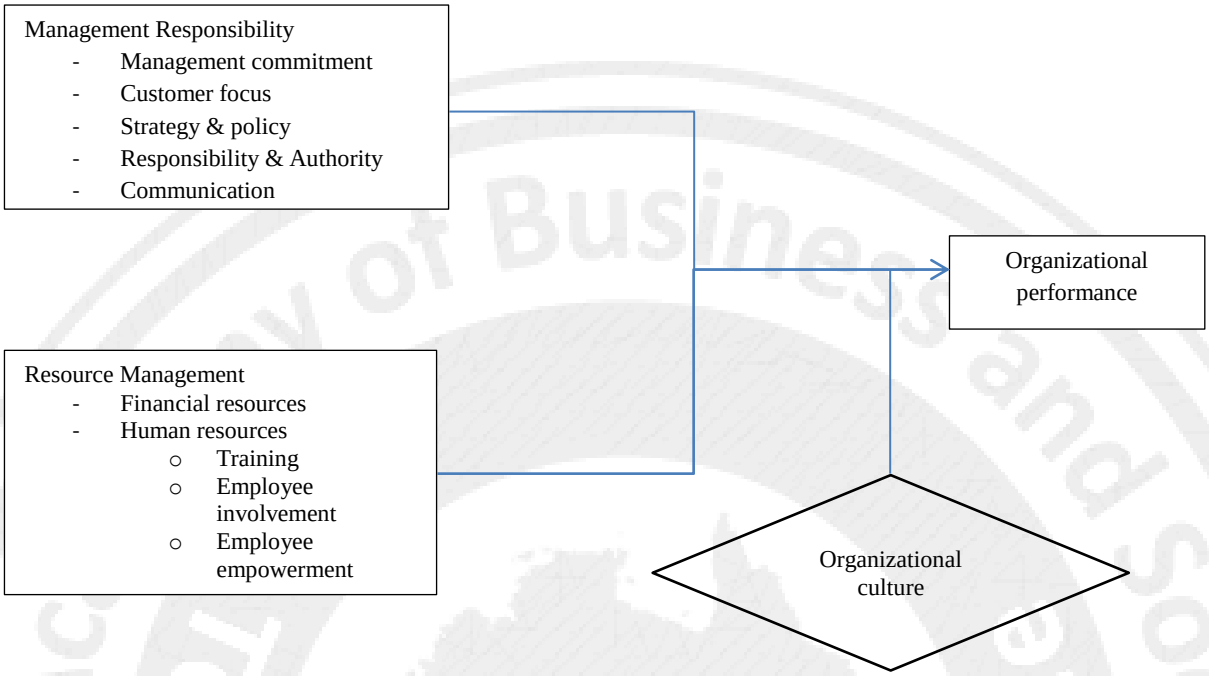
is to measure the level of ISO 9000 soft factor implementation among the organizations. Figure 3 below illustrates the proposed theoretical framework for this study.

FIGURE 3: THEORETICAL FRAMEWORK



METHODOLOGY

Sample and Data Collection Method

The respondents for this study are from automotive based companies in Malaysia. The population size is 275 companies (Othman, 2012) and the sample selected, based on random sample technique is 162 companies (Sekaran, 2003). 33 companies responded to the questionnaires, which represents 20% from the samples selected. According to Linacre (1994), the Rasch analysis model must be able to accept the minimum number of sample size of 16 to 36 respondents, which represents 95% confidence interval.

Instrumentation

The survey method used questionnaires for obtaining the information. The questionnaires were developed based on previous literature related to total quality management, soft factors, ISO 9000 quality system and organizational culture (Abdullah et al., 2008; ISO, 2009; W.G. Lewis et al., 2006; Mehrdad et al., 2012; Shahin & Dabestani, 2011). This questionnaire consists of 74 measured items using 5-point Likert scale in assessing four main variables, which are management responsibility, human resources management, organizational culture and organizational performance with seven sub-variables as illustrated in Figure 3 above. There are 19 items representing the management responsibility, 30 items representing resource management, 6 items representing organizational performance and 19 items representing organizational culture.

The data collected was analysed using WINSTEPS 3.69.1.16 as an analysis tool to perform Rasch analysis. The *logit* value is used instead of the ordinary number. This *logit* value is used as the unit of measurement, since it is obtained for a linear interval scale.

FINDING AND DISCUSSION

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Descriptive Analysis

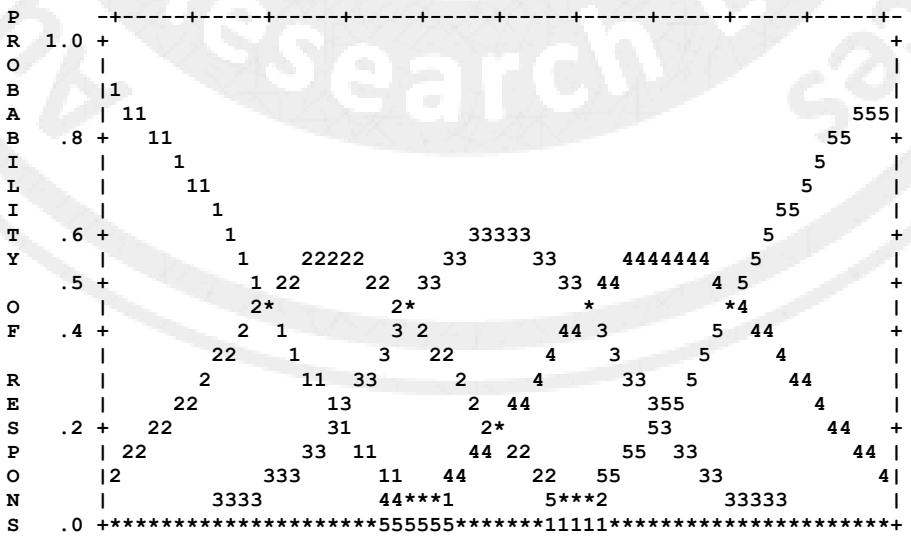
The data was collected from automotive companies. These were randomly selected from established data that related to production of automotive components and assembling. 33 respondents are from large, medium and small organizations. The size of organizations are categorised according to number of employees, parallel with SME definition (SMIDEC, 2006). The result revealed that about 16 organizations or (48%) are from large organizations that have more than 150 employees. 11 organizations (34%) are medium size, having less than 150 employees but more than 50 employees. About 18% or 6 organizations are considered to be small due to having less than 50 employees. From these 33 organizations, 21 (64%) are owned by Non-Bumiputra and 12 (36%) belong to Bumiputra organizations.

Before further analysis takes place, it is important to conduct data cleaning. Data cleaning was conducted to determine the missing data and it was identified that 15 data were missing from 2474 which represents 0.6%. According to Bond & Fox, (2007), since the percentage of missing data is small, no item scores or respondents will be excluded from the data collection.

Rating Scales

Once the data cleaning was completed, the next step was taken to ensure that the appropriate rating scales are applied. In this study, the 5 rating scales are used to measure the variables. According to Bond & Fox (2007), each of the rating categories should have a distinct peak in the probability curve graph. If it is not or is observed to be flat, further investigation is required and collapsing activity may need to be implemented. However, for the rating scales in this study as shown in Figure 4 below, all the rating categories have distinct peak, therefore no collapsing is required.

FIGURE 4: RATING CATEGORIES



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E      -+-----+-----+-----+-----+-----+-----+-----+-----+-----+-
    -5    -4    -3    -2    -1     0     1     2     3     4     5
                Person [MINUS] Item MEASURE
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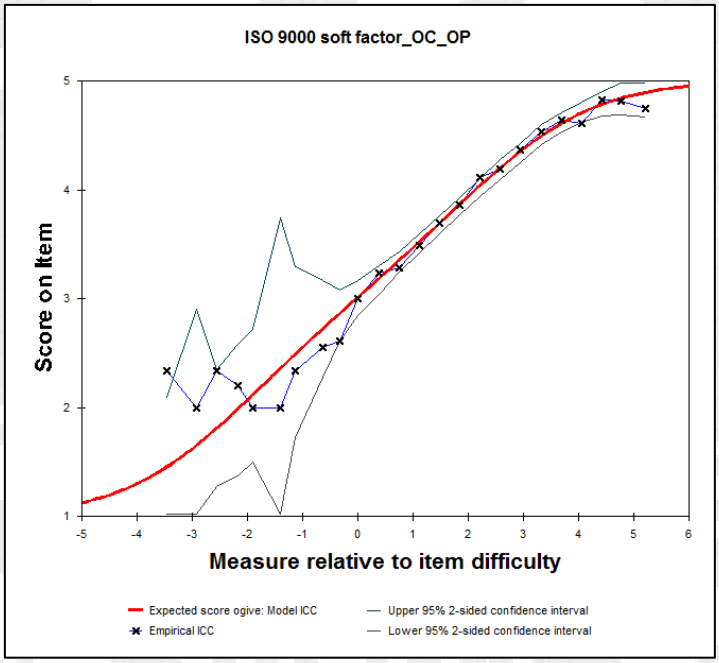
Fit Statistic

As mentioned earlier, under Rasch philosophy, the data collected must fit the Rasch model's specification (Azrilah Abdul Aziz et al., 2007; Bond & Fox, 2007) rather than establishing "best fit line". The concept of fit is a "quality-control mechanism" and it is important to ascertain whether the assumption of unidimensionality holds up empirically (Bond et al., 2007). Therefore the instrument is subjected to validity and reliability. As mentioned by Azrilah Abdul Aziz (2010), Bond & Fox (2007), Fisher (2007) and Linacre (2004), for the data to be considered as fit to the model, the criteria like Point measure correlation (PtMeaCorr) should be between 0.4 and 0.8 logit. 'Outfit mean square' (MNSQ) shall lie between 0.5 and 1.5 logit. Finally, the Outfit Z-standard' (ZSTD) must fall within -2 and 2 logit.

As suggested by Linacre, (2004) those items located outside from the ranges must be separated for purposes of modification or repair prior to discharge. This is because, the suitability of the item will impact and affect the reliability and validity of an instrument. From the 74 items, all the data fall within the criteria mentioned above. The following Figure 5 shows all the data within the 95% confidence interval, which fits to Rasch Model.

FIGURE 5: CATEGORY PROBABILITY CURVE



The reliability issues in Rasch Model are always mentioned in terms of person and item reliabilities. In this study, the person reliability is reported as 0.97, which is deemed to have 'Excellent' reliability (Fisher, 2007), showing the stability of the person response validity. While item reliability index is at 0.82 which is of 'Good'reliability (Fisher, 2007), inferring that the assessment tool can discriminate the person ability and the difficult item.

Finding

The mean for all the items indicated as $Mean_{Item}$ always starts at 0.00 *logit* and the $Mean_{Person}$ is observed at 2.06 *logit*. The most difficult item is located at 3.76*logit* and the easiest item is located at -1.19*logit*, with the standard deviation of 0.67 *logit* while inferring the small spread within the data. While the maximum logit for person is 4.16 *logit*, the minimum *logit* for person is 0.25*logit* and its range is 3.91*logit*, which indicate a medium spread

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among the respondents. The data also shows that there are respondents are above the maximum item *logit*, which indicates respondent's ability in performing the items. Refer Figure 7 for illustration.

The Figure 7 below presents the distribution of the sample in relation to the items thresholds, which is called the Person-item map. This map indicates the ability of organizations in performing the item difficulties. The unit used is *logit* value. The Person-item map is divided into two parts on the same continuum. Along the line on the left-hand side are the respondents, which are represented by automotive organizations as the unit of analysis. It is aligned in the increasing ability from bottom to top. On the right side of the map is the item difficulty. It's arranged from easy to difficult items.

In answering the objective of this study which to identify is the organizational culture moderate the relationship between the ISO 9000 soft factors and organizational performance, the $Mean_{Item}$ for all variables and $Mean_{Item}$ with and without organizational culture is tabulated in Table 4 below.

The highest $Mean_{Item}$ *logit* is 0.33 *logit* belong to organizational performance which indicated that items in organizational performance is located on the higher side of the variable map, which is difficult item to achieve. Management responsibility has the smallest value of -0.47 *logit* indicating that all the organization under studied perceived that the role related to management responsibility is easily been done. From the Table 4 below indicated that the $Mean_{Item}$ without the organizational culture is lower (-0.06 logit) as compare with the organizational culture (0.00 logit). This infer that the organizational culture is an obstacle to the relationship between soft factors and organizational performance. However if an organization able to overcome the organizational culture issues, they are easily can achieve the expected goals. This can shows from the calculating of probability success that available in Rasch Model.

TABLE 4: MEAN$_{ITEM}$ FOR VARIABLES

Variables	Mean (logit)
Management responsibility (MR)	-0.47
Resource management (RM)	0.12
Organizational culture (OC)	0.17
Organizational performance (OP)	0.33
MR,RM,OC and OP	0.00
MR,RM and OP	-0.06

The formula is expressed as the ratio of an event being successful as;

$$\boldsymbol{P(\theta) = \frac{e^{(\beta_n - \delta_i)}}{1+e^{(\beta_n - \delta_i)}}} \quad (1)$$

Where:

e = base of natural logarithm or Euler's number; 2.7183
βn = person's ability
δi = item or task difficulty

Assuming the $Mean_{Person}$ is 2.06 *logit* and $Mean_{Item}$ are 0.00 and -0.06 logit representing with and without organizational culture respectively. The probability of success for the organizations located at 2.06 logit is 89% to achieve their organizational performance if they able to overcome the organizational culture. Another scenario where the person measure is 1.30 logit, than the probability of success is 79%, indicated that 79% of the success is explained by the ISO 9000 soft factors while 21% due to other factors and among them is organizational culture.

It was also noted that from the item-person map the most difficult item among all is per_nfin6 which is related to employee turnover rate. While the most easies item to perform is mr_mc1 which is related to establishing the direction of the organization through vision, mission and objectives. However, those organizations that located below the items, further investigation is required by this organization to identify the root of the problems.

CONCLUSION AND RECOMMENDATIONs

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The valid and reliable instrument is very crucial in ensuring the data collected can answer the research objective. In this research, the Rasch Model was used to validate the instrument. Once all the data fit to Rasch Model through satisfying three pre-set criteria, further analysis was conducted. It was noted that the organizational culture become an obstacle to the relationship between soft factors and organizational performance. In addition to the relationship among employee and employee-management needs to be improved from time to time to support healthy organizational culture. It can be done by encouraging the team works activities among the employee and also through training program.

Some researchers identified that the main obstacles is willingness to change, especially unionized organization (Hutchins, 2007). According to Mahal,(2009) in Asaad & Yusuff, (2013) suggested that if organizations implement good labor management, it will increase employee motivation, this may reduce the employee turnover. This research also revealed that most of the organizations perceived that ISO 9000 soft factors like management responsibility and resource management are easy items and can easily be performed. The result from the study shows that the most difficult items to perform are those related to human resources such as employee empowerment and team building training, which leads to teamwork.

However this study focuses only on the soft factors of ISO 9000 requirement, there are other factors such as measurement and analysis, product realization and documentations etc., which may help the organizations to improve their performance.

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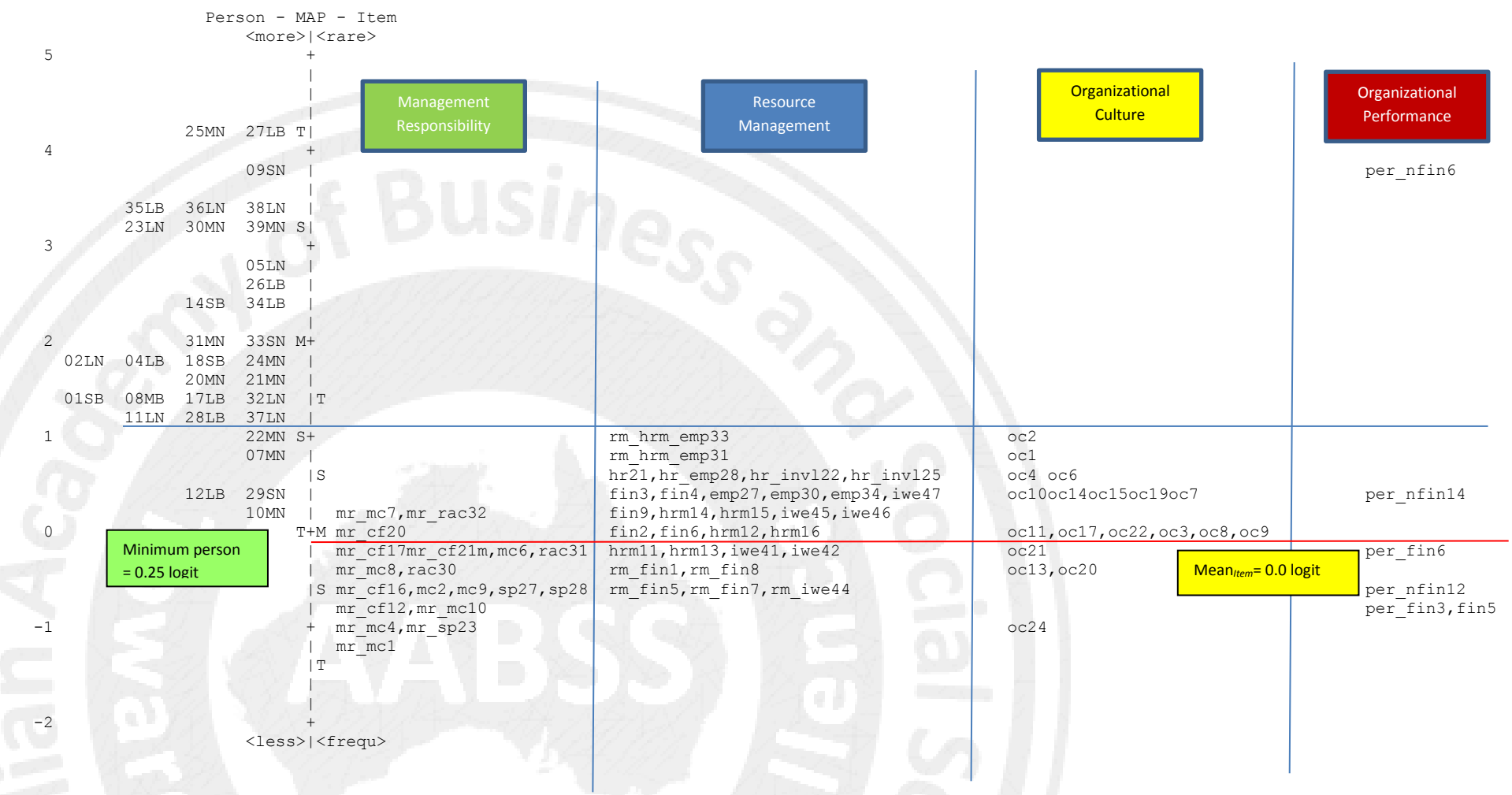
FIGURE 7: PERSON-ITEM MAP ACCORDING TO DIMENSIONS



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